Abstract

Process for the preparation of heat-stable, antimony-free polyesters of neutral color and the products which can be prepared by this process

A process for the preparation of heat-stable, antimony-free polyesters of neutral color by esterification of aromatic dicarboxylic acids or transesterification of lower aliphatic esters of aromatic dicarboxylic acids with aliphatic diols and subsequent polycondensation in which a possible transesterification is carried out in the presence of 20 to 120 ppm, based on the catalyst metal, of a transesterification catalyst, after the esterification or transesterification has ended, phosphoric acid, phosphorous acid and/or phosphonic acids or a derivative thereof are added to the esterification or transesterification batch as a complexing agent in an amount which is 100% of the amount equivalent to the transesterification catalyst employed and up to 99% of the amount equivalent to the cobalt to be employed, up to 80 ppm of cobalt in the form of a cobalt compound are then added to the batch, and the polycondensation is carried out without the addition of antimony, in the presence of 1 to 10 ppm of titanium, which is added in the form of a titanium compound, and if appropriate in the presence of up to 1000 ppm of organic compounds which donate crosslinking structural groups (pentaerythritol) and if appropriate up to 50 ppm of an optical brightener, is described.
The polyester obtainable by this process is furthermore described.